

MR-JN Rotary Servo Motors and Amplifiers

MR-JN Rotary Amplifiers

Amplifier Selection

MR-JN- A

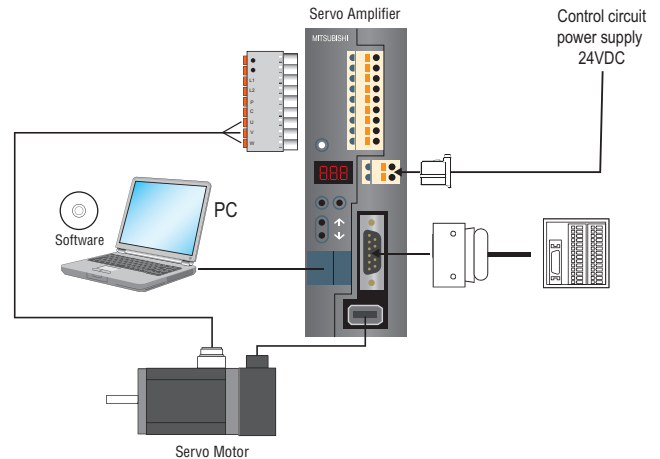
Mitsubishi JN-Series general purpose AC Servo Amplifier

Conforms to the following standards: EN, UL, cUL

Symbol	Description
None	1-Phase 200VAC
1	1-Phase 100VAC (Note)

Note: MR-JN-10A1 and -20A1 are available.

Symbol	Compatible Motor 200VAC Class	
	HF-KN	HF-KP (with reducer)
10	053, 13	053, 13
20	23	23
40	43	43



Servo Amplifier Specifications

Servo Amplifier Model	MR-JN-10A	MR-JN-20A	MR-JN-40A	MR-JN-10A1	MR-JN-20A1
Stocked Item	S	S	S	S	S
Output	Rated Voltage				
	3-phase 170VAC				
Main Circuit	Rated Current (A)				
	1.1	1.6	2.8	1.1	1.6
Power Supply	Voltage/Frequency (*1, *2)				
	1-phase 200VAC to 230VAC 50/60Hz			1-phase 100VAC to 120VAC 50/60Hz	
Control Circuit	Rated Current (A)				
	1.5	2.4	4.5	3.0	5.0
Power Supply	Permissible Voltage Fluctuation				
	1-phase 170VAC to 253VAC			1-phase 85VAC to 132VAC	
Control Circuit	Permissible Frequency Fluctuation				
	±5% maximum				
Power Supply	Voltage				
	24VDC				
Interface	Rated Current (A)				
	0.5				
Power Supply	Permissible Voltage Fluctuation				
	±10% maximum				
Control Circuit	Power Consumption (W)				
	10				
Interface Power Supply	24VDC 10% (required current capacity: 0.2A (*5))				
Tolerable Regenerative Power of Built-In Regenerative Resistor (W) (*3, *4)	-	10	10	-	10
Control System	Sine-wave PWM control/current control system				
Dynamic Brake	Built-in (*6)				
Safety Features	Overcurrent shutdown, regeneration overvoltage shutdown, overload shutdown (electronic thermal), Servo Motor overheat protection, encoder fault protection, regeneration fault protection, undervoltage/sudden power outage protection, overspeed protection, excess error protection				
Position Control Mode	Maximum Input Pulse Frequency				
	1Mpps (when using differential receiver), 200kpps (when using open collector)				
	Positioning Feedback Pulse				
	Encoder resolution: 131072 p/rev				
	Command Pulse Multiple				
Electronic gear A/B multiple, A: 1 to 65535, B: 1 to 65535, 1/50 < A/B < 500					
Internal Speed Control Mode	Positioning Complete Width Setting				
	0 to ±65535 pulses (command pulse unit)				
	Excess Error				
	±3 rotations				
	Torque Limit				
Set by parameters					
Internal Torque Control Mode	Speed Control Range				
	Internal speed command 1:5000				
	Speed Command Input				
	Set by parameters				
Positioning Mode (*8)	Speed Fluctuation Rate				
	±0.01% maximum (load fluctuation 0 to 100%); 0% (power fluctuation ±10%)				
	Torque Limit				
Set by parameters					
Structure	Torque Command Input				
	Set by parameters				
Environment	Speed Limit				
	Set by parameters				
	Ambient Temperature				
	0 to 55°C (32 to 131°F) (non-freezing), storage: -20 to 65°C (-4 to 149°F) (non-freezing) (*7)				
	Ambient Humidity				
90% RH maximum (non-condensing), storage: 90% RH maximum (non-condensing)					
Atmosphere					
Indoors (no direct sunlight); no corrosive gas, inflammable gas, oil mist or dust					
Elevation					
1000m or less above sea level					
Vibration					
5.9m/s ² or less at 10 to 55Hz (direction of X, Y, and Z axes)					
Weight kg (lb)	0.6 (1.3)	0.6 (1.3)	0.7 (1.5)	0.6 (1.3)	0.6 (1.3)

Notes:

- Rated output and speed of a Servo Motor are applicable when the servo amplifier, combined with the Servo Motor, is operated within the specified power supply voltage and frequency. Torque drops when the power supply voltage is below the specified value.
- For torque characteristics when combined with a Servo Motor, refer to "Servo Motor Torque Characteristics" in this catalog.
- Optimal regenerative resistor varies for each system. Select the most suitable regenerative resistor by using the capacity selection software.
- Refer to "Options • Optional regeneration unit" in this catalog for the tolerable regenerative power (W).
- 0.2A is the value when all of the input/output points are used. The current capacity can be stepped down according to the number of input/output points in use. Refer to "MR-JN- A INSTRUCTION MANUAL" for details.
- When using the built-in dynamic brake, refer to "MR-JN- A INSTRUCTION MANUAL" for the permissible load to motor inertia moment ratio.
- The servo amplifier can be installed closely. In this case, keep the ambient temperature within 0 to 45°C (32 to 113°F), or use the servo amplifier at 75% or less of the effective load rate.
- Servo amplifier with software version B0 or above is required for the positioning function.